

**TOTAL CYANIDE DISTILLATION****SM 4500-CN-C-1999 (2011)**

*ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 4020.*

Facility Name: \_\_\_\_\_ VELAP ID: \_\_\_\_\_

Assessor Name: \_\_\_\_\_ Analyst Name: \_\_\_\_\_ Inspection Date: \_\_\_\_\_

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____					
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
1) For nonpotable water, were samples cooled, $\leq 6^{\circ}\text{C}$ , adjusted to pH $> 10$ with NaOH, and reducing agent added if oxidizer present (such as sodium thiosulfate if residual chlorine is present or $\text{H}_2\text{O}_2$ if sulfur compounds present)?	40CFR136.3 Table 11				
2) For drinking water, were samples cooled, $\leq 6^{\circ}\text{C}$ and adjusted to pH $> 12$ with NaOH?	CFR 141.23 k(2), EPA 815-R-05-004				
3) For nonpotable water or drinking water, were samples analyzed within 14 days?	CFR 136.3 Table 11, CFR 141.23 k(2)				
4) Was a 500 mL sample aliquot (or diluted sample if $> 10$ mg CN/L) added to a 1 liter boiling flask?	4.a				
5) Was 10mL of 1N NaOH solution added to the gas scrubber?	4.a				
6) When $\text{S}^{2-}$ generation from the distilling flask was anticipated, was 50 or more mg of powdered $\text{PbCO}_3$ added to the absorber solution?	4.a				
7) Was suction set so that at least 1 air bubble per second entered the boiling flask and maintained throughout the reaction? ( <i>"If this air rate does not prevent sample backup in the delivery tube, increase air-flow rate to 2 air bubbles/s."</i> )	4.a				
8) Was 2g sulfamic acid added through the air inlet tube and washed down with DI water?	4.b				
9) Was 50mL 1+1 sulfuric acid added through the air inlet tube, rinsed with DI water, and air then allowed to mix boiling flask contents for 3 minutes? (And optionally, 20 mL of $\text{MgCl}_2$ is added)	4.c				
10) Was mixture heated with rapid boiling and refluxed for at least 1 hour (rate of 40-50 drops/min from condenser)?	4.d				
11) Was heating discontinued after refluxing but air flow continued for 15 minutes prior to absorption solution removal?	4.d				
12) Was solution transferred to a 250 mL volumetric flask, diluted to volume with distilled water, and mixed?	4.d				

Notes/Comments: \_\_\_\_\_